LLAGAS CREEK
FLOOD CONTROL PROJECT

PUBLIC
INFORMATION PAMPHLET

uary 1980

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REF

Sponsored by:
U.S. Soil Conservation Service

Loma Prieta Resource Conservation District

South Santa Clara Valley Water
Conservation District

Santa Clara Valley Water District

Cover photo descriptions:

Top Left: Frazier Lake Road area looking northeast from the air, December 1955.

Center Left: West Branch Llagas Creek near 2nd Street, Gilroy, 1973.

Bottom Left: West Little Llagas Creek at West Main Avenue, Morgan Hill, looking west, 1973.

Top Right: Sargent Ranch, southeast of Gilroy, near the Pajaro River, December, 1955.

Center Right: Kerley Ranch at U.S. 101, looking southwest, December 1955.

Bottom Right: West Little Llagas Creek at Monterey and 4th Streets, looking west, Morgan Hill, 1973.

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I. Introduction and Purpose of Pamphlet

Llagas Creek, located in southern Santa Clara County, has flooded many times in the past, causing considerable property damage and inconvenience to residents. This pamphlet presents the background of flooding problems and a proposed solution. Each of the sponsors (listed on the front cover) have adopted a policy of providing flood protection within the Llagas Creek Watershed.

II. Project Purposes and Goals

The purposes of the project are watershed protection and flood prevention. Sponsor's goals are to employ a combination of structural, nonstructural, and land treatment measures which will 1) provide land stabilization, thus reducing erosion and sediment production; 2) reduce flood damages to property, land and crops; 3) preserve wildlife habitat within the watershed; 4) preserve and enhance the fishery in Llagas Creek and its tributaries; 5) allow more groundwater recharge; 6) reduce the loss of watershed vegetative cover by wildfires; and 7) improve storm drainage within the watershed.

III. Study Area Description

The Llagas Creek watershed (shown in Figure 1) is 104 square miles (66,400 acres), originating in the Santa Cruz Mountains and terminating on the valley floor at the confluence with the Pajaro River. Major portions of the Cities of Morgan Hill and Gilroy are located within the watershed. Table 1 shows land uses within both the watershed and the one percent floodplain.

The existing streams vary from relatively undisturbed natural creek environments to highly modified and (in some cases) man made earth channels.

Table 1 - Land Uses (1975)

	WATERSHED	
	Acres	%
cropland	24,435	36.8
pasture and hay	5,910	8.9
range land	25,695	38.7
forest and brush	6,527	9.8
wildlife land	322	0.5
urban and other	3,381	5.1
mined land	120	0.2
	66,400	100.0

IV. Historical Flooding

Major flooding has inundated large areas of the watershed 12 times in the last 60 years, primarily during December, January, and February. Recent major floods occurred in the years 1937, 1955, 1958, 1962, and 1969.

The largest recorded flood occurred on December 23, 1955 and was estimated to be a three percent flood (one occurring on the average of once every 33 years over a very long period). Another significant flood of nearly the same magnitude occurred in April, 1958.

V. History of the Llagas Creek Flood Control Project

Major floods in the past, and more frequent local flooding which occurs about four out of five years, caused local residents to request flood control studies be done to cope with the flooding problems. Formal flood control planning began in 1960, when the local sponsors, South Santa Clara Valley Water Conservation District, Loma Prieta Resource Conservation District, and the Santa Clara Valley Water District asked the Soil Conservation Sevice to study the problem. In 1969 Congress authorized a flood control project for Llagas Creek, based on findings of feasibility by SCS.

About 11 miles of channel exavation was done during 1971 and 1972 to provide fill for the South Valley Freeway construction. About 1.2 miles of channel was constructed by the PL566 project in 1973.

The flood control project was halted in 1974 by the sponsors for restudy to insure compliance with environmental laws. This restudy by citizens committee and the SCS was completed in 1976 and subsequently an environment impact statement (EIS) was initiated. The Draft EIS was completed in 1979.

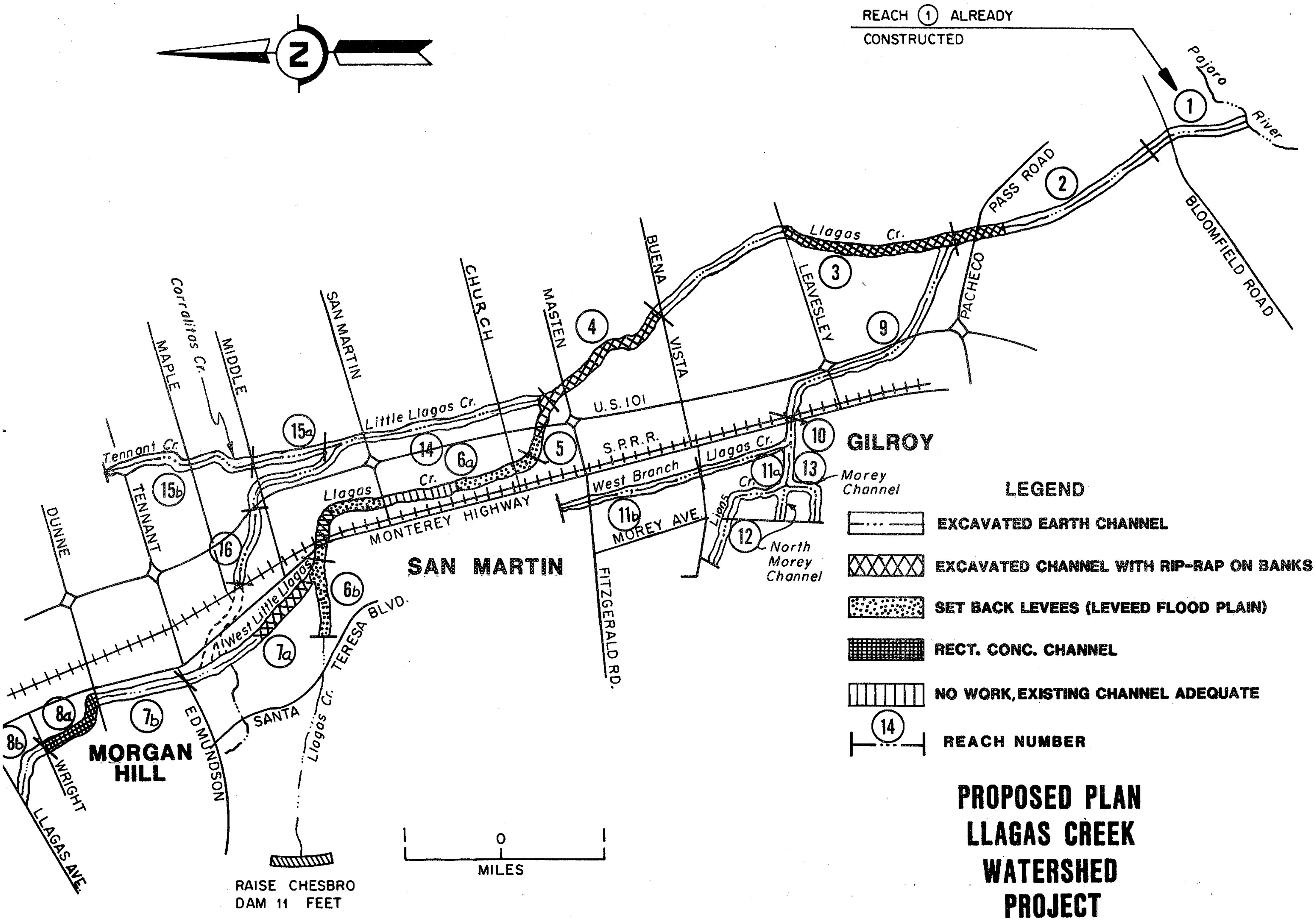
VI. Flooding Problem Description

In rural areas flooding would damage homes and outbuildings, farm equipment, roads, and bridges. Significant agricultural damage would also occur, including lost or damaged crops, introduction of water-borne weeds and plant diseases, debris, erosion and sediment.

Residential and commercial/industrial areas would suffer possible structural damage, deposited sediment and debris, and damaged furniture, landscaping, automobiles, equipment and supplies. Lost business and down-time for commercial and industrial concerns would be considerable. In addition, roads, bridges, and railroads would also be damaged, as well as interrupted circulation and public services. Sewers and septic tanks overflowing would be expected to increase the potential for water-borne diseases. Flooding damage to channels would include bank erosion and channel bottom sedimentation.

VII. The Proposed Flood Control Project

Figure 1 shows the project that was proposed in the draft EIS/EIR. Three major changes are expected to be made to the project resulting from citizen comments received on the draft EIS/EIR. They are: Chesbro Reservoir is currently being investigated to see if its operation (the amount and timing of water releases) can be changed to avoid raising the dam 11 feet and achieve the same flood damage reduction benefits. Reach 4 is being reviewed to see if the many valuable trees can be saved. Reaches 7a, 7b and 8a, in Morgan Hill, may be changed to better fit into Morgan Hill's future redevelopment plans. These redevelopment plans may take many months to complete, therefore, any changes to the Llagas Creek



PROPOSED PLAN LLAGAS CREEK WATERSHED PROJECT

configuration in Morgan Hill will be addressed either in Morgan Hill's redevelopment EIR or in a separate EIR by the Sponsors and SCS. As stated above, the draft EIS/EIR calls for raising Chesbro Dam 11 feet to provide additional flood storage capacity but this may not be necessary pending new studies currently underway.

Another element of the project consists of land treatment measures to reduce erosion and sedimention in the watershed.

In spite of the extent of the proposed project, some of the floodplain of Llagas Creek is common with Uvas Creek, Pacheco Creek and Pajaro River and thus would remain subject to flooding. Also the flooding associated with some of the tributaries would not be resolved by the proposed project.

Right of way width required for the proposed project for the Morgan Hill area would vary from 43 feet, for the rectangular concrete channel, to 200 feet for the largest excavated earth channel. These widths may change when the Morgan Hill redevelopment plans are completed. The Main Branch Llagas Creek right of way width would vary from 194 to 375 feet. In the Gilroy area the right of way widths would vary from 95 to 166 feet.

A total of 14 houses would need to be removed to accommodate the proposed flood control improvements, four in Morgan Hill, five along the Main Branch Llagas (one already removed), and five in the Gilroy area. An additional seven houses and one business would need to be removed if Chesbro Reservoir is raised.

Project costs are listed below in Table 3.

Table 3 - Project Costs (1977 Dollars)

Channel modifications in the Morgan Hill area: $7,784,000
Main Branch Llagas Creek: $18,610,000
Gilroy area: $6,616,000
Chesbro Reservoir enlargement: $8,593,000 (includes right of way and road relocation)
Total Project Cost: $43,684,000

Table 4 shows cost allocations for the proposed project.

Table 4 - Cost Allocations (1977 Dollars)

	Federal Share	Non-Federal Share	Total
Upper Watershed	$13,218,000.	$7,343,000.	$20,561,000.
Lower Watershed	15,852,000.	6,181,000.	22,033,000.
Land Treatment Measures	195,000.	895.000.	1,090,000.
	$29,265,000	$14,419,000	$43,684,000
	(67%)	(33%)	(100%)

Average annual cost: $1,619,000.[1]

Certain funds have already been spent toward completing the Llagas Creek Watershed Project. These funds were for; acquisition of rights of way, construction of Reach 1 (Pajaro River to 1,700 feet upstream of Blomfield Road), planning and design costs, and land treatment measures.

Expenditures to January 1, 1980 are as follows:

Table 5 - Expenditures to January 1980

	Federal Share	Non-Federal Share	Total
Upper Watershed	$359,000	$807,000	$1,166,000
Lower Watershed	1,241,000	1,922,000	3,163,000
Land Treatment Measures	0	760,000 [2]	760,000
	$1,600,000	$3,489,000	$5,089,000

Some of the expenditures were made before 1977 and some after. The actual outlay shown in Table 5 has an average value of 1977 dollars. Therefore, the cost of the remaining work in 1977 dollars is approximately $39 million.

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[1] The average annual cost includes the annual cost of maintenance after the project is constructed. The post-construction maintenance cost will be borne by the Santa Clara Valley Water District from local tax funds.

[2] Land Treatment Costs: $617,000 Upper Watershed
$143,000 Lower Watershed